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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,149	03/11/2004	Takashi Ohama	118736	4313
25944 7590 08/21/2007 OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER MCCULLOUGH, MICHAEL C	
			ART UNIT 3653	PAPER NUMBER
			MAIL DATE 08/21/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/797,149

Applicant(s)

OHAMA ET AL.

Examiner

Michael C. McCullough

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,6-15,18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,6-15,18 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11 April 2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment dated 08 June 2007 has been entered.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a second drive shaft having four segments with each segment having a roller must be shown or the feature(s) canceled from the claim(s). Drawing 5A shows two shafts (both marked 30) each with two segments with rollers but not a single shaft and drawing 6A-C only show axes and not a shaft. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 6 is objected to because of the following informalities: in line 2 the word "is" should be "are". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 11 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. A second drive shaft having four segments each with a roller is not described in the specification. For example, see Paragraph 0029 of the specification, "The segments of the driven roller 20 are fitted on a **pair of support shafts 30**". The specification describes a pair of shafts not a single shaft.

Claim 11 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. A second drive shaft with inclined segments and

two outermost segments parallel to the first drive shaft is not described in the specification. In Paragraph 0035, roller segments parallel to the first shaft are described but not a single shaft having both the parallel roller and the slanted roller segments.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 7, 9, 11, 14, 15, and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 lines 17-19 are indefinite how "the axes of the segments of the driven roller unit **arranged on one side of the center** of the width of the sheet to be fed **are aligned on each side of the center** of the width of the sheet to be fed". Are the axes of the segments arranged on one side of the center OR are the axes of the segments arranged on each side of the center?

Claim 7 recites the limitation "the segments of the driven roller" in line 3. Is this supposed to be "the segments of the driven roller unit"? There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the axis" in line 1. Is this the same axis as claim 1 line 11 or the axes of the segments in claim 1 line 15? There is insufficient antecedent basis for this limitation in the claim.

In claim 11 line 6, "a second drive shaft having at least two segments" is claimed and in line 9 "the second drive shaft has four segments", does the second drive shaft

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have at least two segments, four segments, or at least two and no more than four segments?

In claim 11 lines 6-7, "each segment inclined relative to the first drive shaft" and in lines 10-11 "the two outermost segments parallel to the first drive shaft", it is indefinite if the segments are to be inclined relative to the first drive shaft or are to be parallel to the first drive shaft.

In claim 14 line 3, it is indefinite if "a driven roller" is the same driven roller from claim 11 line 8 or a different driven roller. It is also unclear if "a segment of the drive roller" in line 3 is part of the "plurality of segments" in line 2. A possible solution might be "one of the driven rollers and one of the segments of the drive roller".

In claims 15 and 18 lines 2-4 and 9-12, it is indefinite what is meant "a centermost end of a second drive shaft segment **one of more upstream and more downstream** in the recording medium feed direction than the first drive shaft and the other end of such second drive shaft segment **one of more downstream and more upstream** than the first drive shaft". How is a centermost end more upstream and more downstream than the first drive shaft? How is the other end more downstream and more upstream? What is "centermost" referring to? How can the centermost end more upstream and more downstream and the other end more downstream and more upstream, wouldn't one end have to be more upstream than the other end of the slanted shaft?

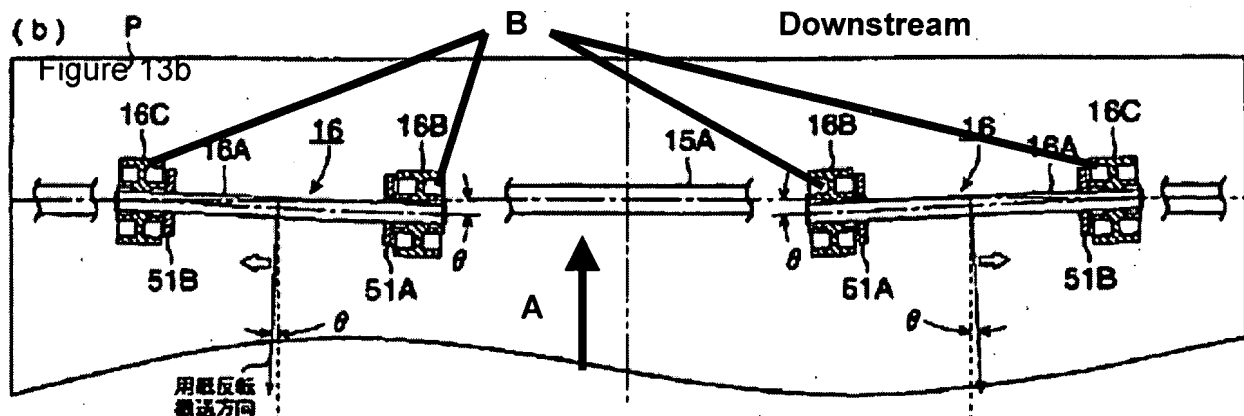
Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 11, 12, 15, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawano et al. (JP 2000-318904). Kawano et al. discloses a downstream sheet conveying mechanism comprising a first drive shaft (15) perpendicular to a feed direction (see Figure 13b arrow A, below) with four drive rollers (15A-C), a second drive shaft (16) with four segments (see Figure 13b elements B, below) and each segment inclined at an angle of $1-3^\circ$ (see Page 6 paragraph 0075), and a centermost end of the second drive shaft segment more downstream (16B) than the ends of the second drive shaft (16C).



Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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6. Claims 1, 3, 6- 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fowler et al. (US 3,66,262) in view of Sako et al. (US 6,073,927). Fowler et al. discloses a sheet feeder in an image reading apparatus comprising an image reading part (37), a drive roller unit (3, 4, 5) with an axis (2) perpendicular to the sheet feed direction (see Figure 1 arrow D, below) that includes driven rollers and is downstream from the image reading part, a driven roller unit (see Figure 1 element C, below) with the same amount of driven rollers (8, 9, 10) as drive rollers arranged symmetrically with respect to a center line (see Figure 3a line E, below) with axes on a slant (8a and 10a) such that the end portion of each axis far from the center of the width is upstream and the close to the center is downstream, an urging member that urges segments of the driven roller unit independently (see column 3 lines 20-27), and a straight conveying path (7 and 25). Fowler et al. does not disclose the drive roller has a coefficient of friction greater than a coefficient of friction of the driven rollers and a conveying pair upstream from an imaging part and a curved conveying path. However, Sako et al. discloses a similar device that includes the drive roller has a coefficient of friction greater than a coefficient of friction of the driven rollers (see column 6 lines 13-20), a conveying roller pair (22 and 21), and a curved conveying path (23) for the purpose of easily sliding against each other (see column 6 lines 13-20), separating a sheet (see column 4 lines 56-63), and guiding a sheet. It would have been obvious for a person of ordinary skill in the art at the time of the applicant's invention to modify Fowler et al. by utilizing drive rollers with a coefficient of friction greater than a coefficient of friction of driven rollers, a conveying pair, and a curved conveying path as

disclosed by Sako et al., for the purposes of easily sliding against each other, separating a sheet, and guiding a sheet.

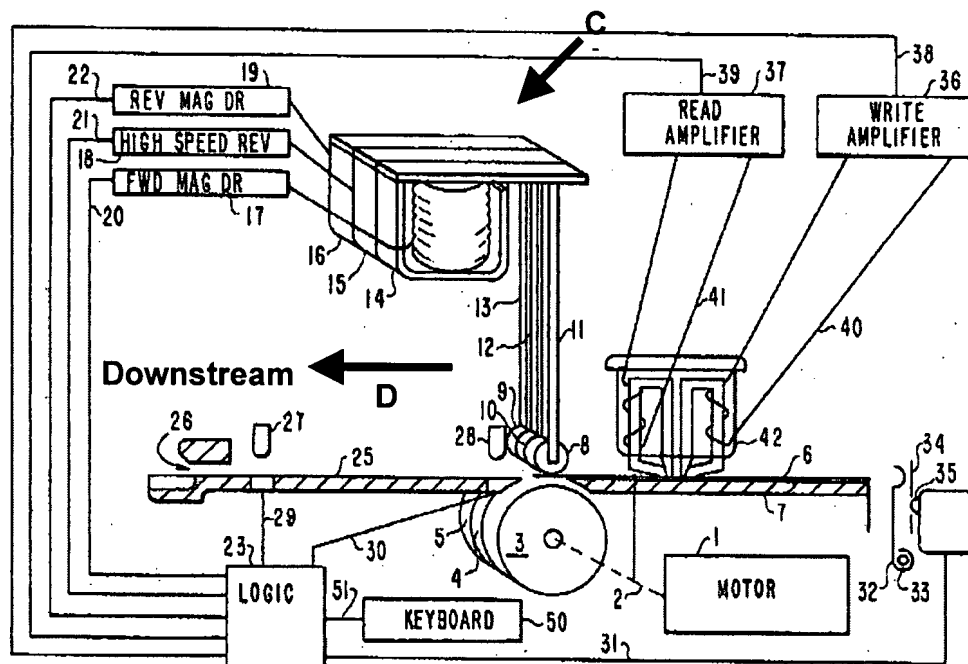


FIG. 1

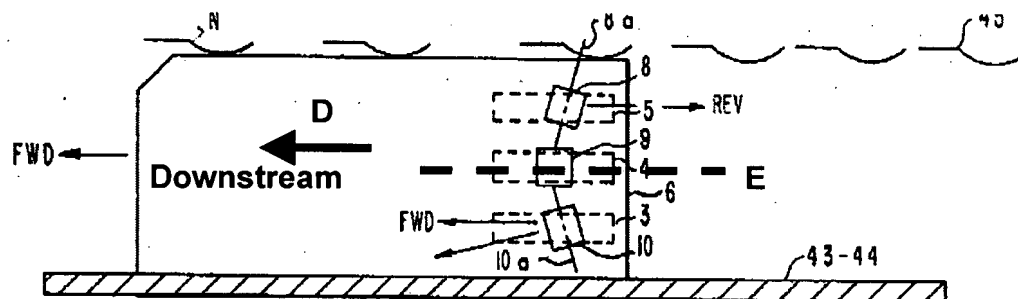


FIG. 3a

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fowler et al. (US 3,66,262) in view of Sako et al. (US 6,073,927) as applied to claims 1, 3, 6-8, and 10 above, and further in view of Kawano et al. (JP 2000-318904). Fowler et al. in view of Sako et al. discloses all of the limitations of the claims but does not disclose the axis of the driven roller is inclined at an angle of 1-3°. However, Kawano et al. discloses

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a similar device that includes an axis of the driven roller is inclined at an angle of 1-3° (see Page 6 paragraph 0075 and Figure 13b elements 16) for the purpose of preventing formation of wrinkles (see Page 7 paragraph 0088). It would have been obvious for a person of ordinary skill in the art at the time of the applicant's invention to modify Fowler et al. in view of Sako et al. by utilizing an axis of the driven roller is inclined at an angle of 1-3°, as disclosed by Kawano et al., for the purpose of preventing formation of wrinkles.

8. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawano et al. in view of Sako et al. (US 6,076,927). Kawano et al. discloses all of the limitations of the claims but does not disclose the drive roller has a coefficient of friction greater than a coefficient of friction of the driven rollers. However, Sako et al. discloses a similar device that includes the drive roller has a coefficient of friction greater than a coefficient of friction of the driven rollers (see column 6 lines 13-20) for the purpose of easily sliding against each other (see column 6 lines 13-20). It would have been obvious for a person of ordinary skill in the art at the time of the applicant's invention to modify Kawano et al. by utilizing drive rollers with a coefficient of friction greater than a coefficient of friction of driven rollers, as disclosed by Sako et al., for the purpose of easily sliding against each other.

Response to Arguments

Applicant's arguments with respect to claims 1, 3, and 6-10 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 08 June 2007 on page 7 last paragraph have been fully considered but they are not persuasive. See above 35 U.S.C. 112, 2nd paragraph rejection. As best understood Kawano et al. anticipates the claims with each segment inclined.

Applicant's arguments for claims 18 and 19 have been fully considered but they are not persuasive. Applicant argues unclaimed subject matter and as best understood Kawano et al. anticipates claims 18 and 19. See above 35 U.S.C. 112, 2nd paragraph rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. McCullough whose telephone number is (571) 272-7805. The examiner can normally be reached on Monday-Friday, 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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